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Eye Radiation & Environmental Research Laboratory
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# 54 Month Progress Report
# Office of International Health Programs (EH-63), Department of Energy

## Synopsis of DOE Grant DE-FG02-95EH89548

***Title of Project:*** Ocular Radiation Effects in the Chernobyl Liquidators

***Principal Investigator:*** Basil V. Worgul, Ph.D.

***Period Covered in this Report:*** October 1, 1999 – March 30, 2000

## *I. Summary of Work for the Upcoming 6 Months*

During the next 18 months the examinations will continue at the nine sites involved in the project. While the Institute of Occupational Health (IOH) will be entering the data from the epidemiological questionnaire for each subject, the Eye Radiation & Environmental Research Laboratory (ERERL) will continue analyses of the Eye Examination Forms. We are able to fully digitize all the forms which are received. Unfortunately they arrive in a saltatory fashion due to the number and the means of transport. Once acquired there are digitized using a special scanner and support equipment set up in the ERERL. A technician (Ms. Janice David) has been trained in handling the forms and equipment and dealing with special cases and performs much of the data entry. In addition, to expedite the process, Dr. Shang Xu, a postdoctoral fellow and Ms Chand Ramswarmy, our secretary spend a substantial fraction of their time also scanning forms. Dr. Anna Junk oversees the data digitization (and if free also scans forms) and the database derived from the forms.

We are also beginning to generate data from the case-control study. The subjects for that study which will eventually number 1000 are being recruited and over 700 have been examined. Dr Anna Junk will travel to Kiev on April 10th to determine progress and return with the forms amassed since Dr. Worgul's last visit in December. Dr Worgul himself will travel to Kiev during the summer for the same purposes. We are also requesting that the State Department allow their courier service to ship forms as they are generated. That accommodation has not yet been finalized.

## *II. Milestones and Deliverables Accomplished During the Reporting Period*

During this reporting period, we continued subject contacts, recruitment and data acquisition the major thrus6st of our proposed plan. The milestones for entire year 5 were:

1. Second round of exams completed for the first half of the cohort
2. Data analyzed for those with reliable dosimetry
3. Preliminary case-control data analyses
4. Retrospective dosimetry continues

During the first six months of year 5, the period this progress report covers, we have addressed at least a portion of each of these milestones including initiating the nested case control study.

1. The second examinations of the initial 6,000-subject cohort are well on their way and data is being accumulated.

2. The form scanning has progressed to the point that the major bottleneck has been in the transport of the forms from Kiev to the States.

3. Three individuals are now trained and involved in form scanning. This is done without increasing costs to the DOE grant.

4. In order to assure compliance and transport forms the PI (BVW) traveled to Kiev (See III below for dates) and met with all the principals in the study..

5. The database for the ophthalmology portion continues to be tweaked to maximize the utility of the data gleaned while reducing inefficiency in the interview process.

As discussed in the half-year progress reports of Drs. Kundiev and Chumak the cohort examinations are proceeding on schedule. We do not anticipate any problems, which could encumber the program or otherwise interfere with its successful continuance and progress.

### *III. Other Relevant Information, Including Relevant Trip Reports, Obstacles to Completion of Work Outlined in FY Work Proposal; Unexpected costs; etc.*

The PI, and a team member Anna Junk, traveled to Ft. Lauderdale, Florida, May 3-9, to attend the annual national meeting of the Association for Research in Vision and Ophthalmology (ARVO). ARVO is a forum highly relevant to our work in that among the attendees are world class ophthalmic epidemiologists and cataract specialists. In addition to the scientific meetings the PI visited with the Kiev team July 27 –August 4, 1999 and December 15 – 23, 1999, to assess progress in regards to cohort selection and contact. Several meetings were held with Dr. Chumak and his team as well as with Prof. Kundiev and his staff. Extensive meetings were also held with Prof. Sergienko and Dr's Parkomenko and Ruban regarding the ophthalmic portion of the cohort study and the status of the examining physicians. All the meetings proved fruitful and did not reveal any significant potential problems related to the conduct of the project. The trips also provided the opportunity to transport completed forms from Kiev to New York.

We have a substantial bottleneck in arranging transport of the completed forms from Ukraine to the States. Using modest annual funding from the Department of Ophthalmology of Columbia University to the ERERL the PI has assigned two additional people (there are now 4) to scan the acquired forms. Thus the project is financially unaffected by the extra personnel. With the added staff form scanning has far outstripped the rate at which we receive forms from Ukraine.

The transport of the completed forms is being expedited by using individuals who travel to and from Kiev (Included among them are members of the Thyroid Study team headed by Geoffrey Howe) and have agreed to act as couriers.

3/30/00
Date

Basil V. Worgul